2013 Georgia Tuberculosis Report

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Tuberculosis (TB) Surveillance in Georgia

TB is a reportable disease in Georgia. All Georgia physicians, laboratories and other health care providers are required by law to immediately report clinical and laboratory confirmed TB cases under their care to Georgia public health authorities. TB cases may be directly reported to a County Health Department, a District Health Office, or to the state TB Program and TB Epidemiology Section of the Georgia Department of Public Health (DPH), which is responsible for the systematic collection of all reported TB cases in the state. Immediate reporting of TB cases enables appropriate public health follow-up of patients, including administration of directly observed therapy, monitoring TB treatment until completion, evaluating and screening contacts exposed to a TB case, and outbreak investigation and control.

TB cases in Georgia can be reported electronically through the State Electronic Notifiable Disease Surveillance System (SendSS), a secure web-based surveillance software developed by DPH, or by calling, mailing or faxing a report to public health authorities. Hospital infection control preventionists as well as public health nurses, outreach staff, epidemiologists, and communicable disease specialists involved in disease surveillance are encouraged to report TB through SendSS and register to become a SendSS user by logging into the system's Web site at: https://sendss.state.ga.us then selecting TB from the list of reportable diseases.

Public health authorities collect data on reported TB cases that include demographic, clinical, risk factor, and contact information, which are analyzed to describe the distribution of the disease among Georgia's population, identify high risk groups and TB clusters, describe trends in morbidity, mortality, drug resistance patterns, treatment outcomes, and infection rates among contacts to TB cases. The data are used at state and local levels to guide policy and decision making, set priorities for program interventions, evaluate program performance for the prevention and control of TB in Georgia, and educate key stakeholders and the general public on TB. Georgia's TB surveillance data are transmitted electronically to the U.S. Centers for Disease Control and Prevention (CDC) and become part of the national TB surveillance database.

Current Epidemiology of Tuberculosis in Georgia

Georgia reported 339 new tuberculosis (TB) cases in 2013. This represents a 5.6% decrease from 359 TB cases reported in 2012. TB case numbers have decreased 63% since 1991 when the peak of a resurgent period of tuberculosis occurred in Georgia (Figure 1). The TB case rate in Georgia decreased from 3.6 cases per 100,000 population during 2012 to 3.4 cases per 100,000 in 2013, slightly higher than the U.S. TB case rate in 2013 of 3.0 cases per 100,000 (Figure 2). In 2013, Georgia had the fourth highest number of TB cases and the seventh highest TB case rate among the 50 states of the U.S.

Geographic Distribution

Among the 159 counties in Georgia, four counties in the metropolitan Atlanta area reported the highest number of TB cases in 2013: DeKalb (79 cases), Fulton (49), Gwinnett (48), and Cobb (19) (Table 1). These four counties accounted for 58% of TB cases reported in Georgia in 2013.

Among Georgia's 18 Health Districts, which have oversight responsibility for public health in the state's 159 counties, DeKalb Health District had the highest TB case rate in 2013 (11.1 per 100,000), followed by Fulton (5.0 per 100,000) and Gwinnett (4.6 per 100,000).

Sex and Age Distribution

In 2013, TB in Georgia occurred predominantly among males (227 cases, 67%), compared to females (112, 33%); while the highest proportion of TB cases by age group occurred among persons 25-44 years old (123 cases, 36%) (Figure 5). The highest TB case rate by age group was among persons 25-44 and 45-64 years old (4.5 per 100,000) while the lowest was among children 5-14 years old (1.2 per 100,000) (Figure 6). The TB case rate for children younger than 5 years of age, an age group at high risk for developing deadly forms of TB, decreased from 1.6 per 100,000 in 2012 to 1.5 per 100,000 in Georgia during 2013.

Race/Ethnicity Distribution and TB Disparities

TB disproportionately affects racial/ethnic minorities in Georgia. In 2013, non-Hispanic blacks, Asians and Hispanics, accounted for 51%, 21% and 17% of TB cases in Georgia respectively, but only represented 30.5%, 3.6% and 9.2% of Georgia's population respectively (Figure 7). Non-Hispanic whites constituted 11% of TB cases in 2013. The highest TB case rate among race/ethnic groups was among Asians (19.5 per 100,000), followed by Hispanics (6.2 per 100,000) and non-Hispanic blacks (5.5 per 100,000) (Figure 8). The black non-Hispanic TB case rate in 2013 represents an 82% decrease from the TB case rate in 1993 (30.6 per 100,000) in this population. The black non-Hispanic TB case rate, however, was still about 8 times higher than the white non-Hispanic TB case rate (0.7 per 100,000) in Georgia during 2013 (Figure 9).

High-Risk Populations

Foreign-Born

For the first time since 1993, when expanded TB surveillance in the U.S. started, TB cases among persons born outside of the United States accounted for the majority of TB cases in Georgia - 51% in 2013 compared to 5% in 1993. Most foreign-born TB cases reported in 2013 came from Mexico (18%), India (14%), and Ethiopia (10%) - countries where TB is an endemic disease (Figures 10-11). Among 173 foreign-born cases, 65 (38%) were diagnosed in the first five years of their arrival in the U.S.

In 2013, four Health Districts reported 72% of the total number of foreign-born TB cases in Georgia: DeKalb (57 cases), Gwinnett (41), Fulton (14) and Cobb (13). Among these Health Districts, foreign-born TB cases accounted for more than half of the TB cases in Gwinnett (85%), DeKalb (72%), and Cobb (68%).

HIV Co-Infection

All TB patients need to be tested for HIV infection because TB treatment may change when antiretroviral therapy for HIV is given, and active TB often accelerates the natural progression of HIV infection. Among 311 TB cases in Georgia with known HIV status in 2013, 13% were HIV-positive compared to 12% in 2012 (Figure 12). Among 39 HIV co-infected TB cases in 2013, 85% were non-Hispanic blacks, 74% were male and 54% were 25-44 years old.

HIV status was reported in 92% of TB cases in 2013 compared to 93% in 2012. In the high-risk age group of adults 25-44 years of age, the percentage of TB cases for which HIV was reported was 97% in 2012 and 2013. Among 28 TB cases whose HIV status was not reported, HIV testing was not offered to 15 cases (54%), nine (32%) refused testing, and the HIV test result was unknown in four cases (14%). The highest number and proportion of TB cases by age group that were not offered the HIV test were among children 0-14 years old (9 cases, 60%).

Congregate Settings and Substance Abuse

Persons residing in crowded congregate settings such as homeless shelters, prisons, and nursing homes are at risk for acquiring TB. In 2013, 26 (8%) TB cases in Georgia were homeless, 10 (3%) were residents of correctional facilities, and 2 (1%) were residents of long-term care facilities. Of the 10 TB cases incarcerated in correctional facilities, four (40%) were inmates in state prisons, four (40%) in county jails, and two (20%) were in the Immigration and Custom Enforcement Detention Center in Stewart County.

Substance abuse is the most commonly reported behavioral risk factor among patients with TB in the United States. TB patients who abuse substances often experience treatment failure and remain infectious longer because treatment failure presumably extends periods of infectiousness. In Georgia, abuse of either illicit drugs or alcohol was reported in 48 (14%) of TB cases in 2013 (Table 3, Figure 13).

Pediatric TB

TB in children is considered a sentinel public health event because it often indicates recent transmission from an infectious adult case. Additionally, potentially lethal forms of TB such as TB meningitis or disseminated TB can develop in very young children. In 2013, children younger than 15 years old comprised 8% of Georgia TB cases; 10 cases (1.5 per 100,000) were reported in children younger than 5 years old, 17 cases (1.2 per 100,000) were reported in children 5-14 years old. One child had TB meningitis.

Latent tuberculosis infection (LTBI) in children younger than five years old is also a reportable disease in Georgia. When LTBI in a child less than five years of age is reported, public health personnel will initiate contact investigations to identify the source of the infection, recommend treatment for latent TB infection, follow up with the child to ensure completion of treatment and monitor for development of active TB disease. Early identification of TB infection and treatment in children can prevent progression to active disease and identify a previously undiagnosed and untreated case of active TB.
In 2013, 45 children younger than five years old were reported to have LTBI in Georgia; 27 were identified by TB screening in pediatric clinics, and 18 from contact investigations. Public health staff identified the source case of the child's infection in 24 (53%) of these children.

Drug Resistance

Among 236 culture-positive TB cases in Georgia during 2013, 100% were tested for initial drug susceptibility to the three first-line anti-TB medications: isoniazid (INH), rifampin (RIF), and ethambutol (EMB). Of 224 tested isolates from Georgia cases with no previous history of TB, 19 (8.5%) had primary resistance to INH, five (2.2%) to RIF, and none (0%) to EMB (Table 4). Two (0.9%) cases in 2013 had multidrug-resistant TB case (MDR-TB, i.e. TB resistant to at least INH and RIF). The percentage of cases with primary INH resistance (INH-R) ranged from 7% to 14% in the past five years while an average of two MDR-TB cases per year was reported in Georgia over that same time period (Figure 14).

Indicators of Infectiousness

Persons with pulmonary or laryngeal TB have the potential to infect others with TB, and infectiousness is higher if their sputum smears are positive for acid-fast bacilli (AFB), sputum cultures are positive for *Mycobacterium tuberculosis*, or cavitary lesions are present on chest radiography. In 2013, 78% of all Georgia TB cases had pulmonary

TB, 55% had sputum cultures that were positive for *Mycobacterium tuberculosis*, 34% were sputum AFB smear-positive, and 19% showed cavitary lesions on chest radiography.

Initial Diagnosis, Health Provider Data, and Directly Observed Therapy

In Georgia, the majority of TB patients are initially diagnosed in a hospital and patients are followed up by county health departments after discharge to continue their TB treatment. In 2013, 194 (57%) of the 339 TB cases in Georgia were reported initially by a hospital. Ten hospitals in Georgia reported five or more TB cases in 2013: Grady Memorial Hospital (35 cases), DeKalb Medical Center (12 cases), Northside Hospital (11 cases), Gwinnett Medical Center (10 cases), Phoebe Putney Memorial Hospital (8 cases), Medical Center of Central Georgia (6 cases), and Atlanta Medical Center, Children's Healthcare of Atlanta at Scottish Rite, Northside Hospital, and Wellstar Kennestone Hospital reported (5 cases) each. These ten hospitals accounted for more than half of all patients hospitalized for TB in Georgia in 2013.

Among TB cases with available data on type of outpatient healthcare provider, county health departments provided case management for 85% of all Georgia TB cases, 10% of cases were treated by health department and private physician, correctional facilities treated 1%, 3% of cases were cared for solely by a private physician and only 1% were managed solely as in-patients. County health department staff provides directly observed therapy (DOT) to TB patients, which entails watching a patient swallow every dose of their TB medications for at least 6 months. Among 289 Georgia TB cases reported in 2013 with available case completion data, 88% received TB treatment entirely by DOT, 8% were treated by a combination of DOT and self-administered therapy, and 3% self-administered their medications for the entire duration of their treatment.

TB Mortality

Twenty persons died of TB in Georgia in 2012, the most recent year with available mortality statistics. The age-adjusted TB mortality rate in 2012 was 0.2 per 100,000.

TB Contact Investigations and Latent TB Infection

Public health authorities routinely conduct a contact investigation among persons exposed to a TB case to identify secondary TB cases and contacts with latent TB infection (LTBI). Index TB cases with positive acid-fast bacillus (AFB) sputum-smear results or pulmonary cavities have the highest priority for investigation. During a contact investigation, public health staff ask recent contacts to a case if they have TB-like symptoms, administer a TB skin test (TST) or interferon gamma release assay (IGRA), repeat the TST or IGRA 8-10 weeks after the last exposure to the index case if the initial TST or IGRA is negative, and have a chest radiology exam performed if the TST or IGRA is positive. Persons with LTBI have a positive TST or IGRA, but are

asymptomatic and have a normal chest radiology exam. They are not contagious but have a 10% chance of developing TB disease later in life if they do not receive treatment for LTBI.

Among 5,173 identified contacts of all Georgia TB cases reported in 2012 (the most recent year with completed contact investigation data), 3,814 (73%) were completely evaluated for TB disease and LTBI. Of the completely evaluated contacts, 908 (24%) had LTBI and 29 (0.8%) had TB disease. Among the 908 contacts with LTBI, 574 (71%) started LTBI treatment and among these contacts who started LTBI treatment, 369 (64%) completed LTBI treatment, 76 (13%) chose to stop LTBI treatment on their own, 49 (8%) were lost to follow-up, 34 (6%) had adverse side-effects, 14 (2%) stopped due to a provider's decision, 10 (2%) moved, 3 (0.5%) developed active TB, and 19 (3%) had missing data for the reason for stopping LTBI treatment.

TB Program Objectives:

Objective 1**:** By 2015, 93% of Georgia TB patients will complete a course of TB treatment within 12 months of starting treatment.

Among 291 TB cases reported in 2012 that were eligible to complete TB treatment within 12 months, 275 (94.5%) completed treatment within 12 months; 7 (2.4%) completed treatment after 12 months, 4 (1.4%) were lost to follow-up, 3 (1%) had "Other" cited as the reason for not completing treatment, 1 (0.3%) refused treatment, and 1 (0.3%) had an adverse reaction to TB medications (Table 6, Figure 15).

Objective 2: By 2015, 100% of TB cases with sputum smears that are positive for acid-fast bacillus (AFB) will have contacts identified.

In 2012, all TB patients with positive AFB sputum smears had contacts elicited.

Objective 3: By 2015, increase the proportion of contacts of acid fast bacilli (AFB) sputum smear positive (SSP) TB cases in Georgia who are evaluated for TB infection or disease to 93%

Among 3,523 contacts to AFB sputum smear positive (SSP) patients in 2012, 2,490 (71%) were completely evaluated (Table 7). Among 835 contacts that were not completely evaluated and had available data on reason for an incomplete evaluation, 649 (78%) refused evaluation or were uncooperative, 139 (17%) were lost to follow-up, 27 (3%) moved, 11 (1%) were still being follow-up, 10 (1%) had "Other" selected as the reason for incomplete evaluation, and 1 (.1%) died.

Objective 4: By 2015, among infected contacts of acid fast bacilli (AFB) sputum smear positive (SSP) TB cases in Georgia, at least 70 percent who started therapy for latent TB infection (LTBI) will complete LTBI therapy.

Among 445 infected contacts of SSP TB patients started on LTBI treatment in 2012 with data on treatment completion, 287 (66%) completed treatment, 60 (14%) chose to stop treatment on their own, 37 (8%) were lost to follow-up, 29 (7%) stopped treatment due to adverse side effects, 11 (2%) stopped treatment due to a provider's decision, 8 (2%) moved, and 2 (0.5%) developed active TB (Tables 8-9).

Table 1. Number of TB Cases and TB Case Rates* per 100,000 population by County, Georgia, 2012-2013

COUNTY	2012		2013	
	Number of TB Cases	TB Case Rate	Number of TB Cases	TB Case Rate
Appling	<5	--	< 5	--
Atkinson	<5	--	< 5	--
Bacon	0	0	0	0
Baker	0	0	0	0
Baldwin	<5	--	< 5	--
Banks	0	0	0	0
Barrow	<5	--	< 5	--
Bartow	0	0	< 5	--
Ben Hill	0	0	0	0
Berrien	5	26.3	< 5	--
Bibb	<5	--	10	6.5
Bleckley	0	0	< 5	--
Brantley	0	0	0	0
Brooks	0	0	0	0
Bryan	<5	--	0	0
Bulloch	0	0	< 5	--
Burke	<5	--	< 5	--
Butts	0	0	0	0
Calhoun	0	0	0	0
Camden	0	0	0	0
Candler	0	0	< 5	--
Carroll	0	0	0	0
Catoosa	0	0	0	0
Charlton	0	0	0	0
Chatham	9	3.3	< 5	--
Chattahoochee	0	0	< 5	--
Chattooga	<5	--	0	0
Cherokee	<5	--	0	0
Clarke	<5	--	< 5	--
Clay	<5	--	0	0
Clayton	13	4.9	9	3.4
Clinch	<5	--	< 5	--
Cobb	15	2.1	17	2.4
Coffee	<5	--	0	0
Colquitt	<5	--	0	0
- Columbia excludes Augusta State Med Prison (ASMP) - ASMP only	<5 6	-- na	<5 <5	-- na
Cook	0	0	< 5	--
Coweta	<5	--	< 5	--
Crawford	0	0	0	0
Crisp	<5	--	< 5	--

COUNTY	2012		2013	
	Number of TB Cases	TB Case Rate	Number of TB Cases	TB Case Rate
Dade	0	0	0	0
Dawson	0	0	< 5	--
Decatur	0	0	< 5	--
DeKalb	81	11.5	79	11.1
Dodge	0	0	< 5	--
Dooly	5	34.9	0	0
Dougherty	9	9.5	6	6.5
Douglas	<5	--	< 5	--
Early	0	0	0	0
Echols	0	0	0	0
Effingham	<5	--	< 5	--
Elbert	<5	--	0	0
Emanuel	<5	--	< 5	--
Evans	<5	--	0	0
Fannin	0	0	0	0
Fayette	<5	--	0	0
Floyd	<5	--	< 5	--
Forsyth	0	0	< 5	--
Franklin	0	0	0	0
Fulton	54	5.5	49	5.0
Gilmer	0	0	< 5	--
Glascock	0	0	0	0
Glynn	<5	--	< 5	--
Gordon	<5	--	0	0
Grady	<5	--	0	0
Greene	0	0	0	0
Gwinnett	29	3.4	45	5.2
Habersham	<5	--	< 5	--
Hall	<5	--	7	3.7
Hancock	0	0	0	0
Haralson	<5	--	< 5	--
Harris	0	0	0	0
Hart	0	0	< 5	--
Heard	0	0	0	0
Henry	<5	--	< 5	--
Houston	<5	--	< 5	--
Irwin	0	0	0	0
Jackson	<5	--	< 5	--
Jasper	<5	--	0	0
Jeff Davis	0	0	0	0
Jefferson	0	0	0	0
Jenkins	0	0	0	0
Johnson	0	0	0	0

COUNTY	2012		2013	
	Number of TB Cases	TB Case Rate	Number of TB Cases	TB Case Rate
Jones	0	0	0	0
Lamar	0	0	0	0
Lanier	0	0	0	0
Laurens	<5	--	< 5	--
Lee	<5	--	< 5	--
Liberty	<5	--	< 5	--
Lincoln	0	0	0	0
Long	<5	--	0	0
Lowndes	5	4.4	6	5.3
Lumpkin	<5	--	< 5	--
Macon	<5	--	< 5	--
Madison	<5	--	0	0
Marion	0	0	0	0
McDuffie	0	0	0	0
McIntosh	<5	--	0	0
Meriwether	<5	--	0	0
Miller	0	0	0	0
Mitchell	0	0	6	26.0
Monroe	0	0	0	0
Montgomery	0	0	0	0
Morgan	0	0	0	0
Murray	<5	--	< 5	--
Muscogee	6	3.0	< 5	--
Newton	<5	--	0	0
Oconee	<5	--	0	0
Oglethorpe	0	0	0	0
Paulding	<5	--	0	0
Peach	0	0	0	0
Pickens	0	0	0	0
Pierce	<5	--	0	0
Pike	0	0	0	0
Polk	0	0	< 5	--
Pulaski	0	0	0	0
Putnam	<5	--	0	0
Quitman	0	0	0	0
Rabun	0	0	0	0
Randolph	0	0	0	0
Richmond	11	5.4	10	5.0
Rockdale	<5	--	< 5	--
Schley	0	0	0	0
Screven	0	0	0	0
Seminole	0	0	0	0
Spalding	<5	--	< 5	--

COUNTY	2012		2013	
	Number of TB Cases	TB Case Rate	Number of TB Cases	TB Case Rate
Stephens	5	19.3	0	0
- Stewart excludes Stewart ICE Detention Center (SDC) - SDC only	0 5	0 na	0 <5	0 na
Sumter	<5	--	0	0
Talbot	0	0	0	0
Taliaferro	0	0	0	0
Tattnall	0	0	< 5	--
Taylor	0	0	0	0
Telfair	0	0	0	0
Terrell	<5	--	0	0
Thomas	0	0	< 5	--
Tift	<5	--	< 5	--
Toombs	<5	--	< 5	--
Towns	0	0	< 5	--
Treutlen	0	0	0	0
Troup	6	8.8	< 5	--
Turner	0	0	0	0
Twiggs	0	0	0	0
Union	0	0	< 5	--
Upson	<5	--	0	0
Walker	<5	--	< 5	--
Walton	0	0	0	0
Ware	0	0	< 5	--
Warren	0	0	< 5	--
Washington	0	0	0	0
Wayne	<5	--	0	0
Webster	<5	--	0	0
Wheeler	0	0	0	0
White	<5	--	0	0
Whitfield	0	0	< 5	--
Wilcox	0	0	0	0
Wilkes	0	0	< 5	--
Wilkinson	0	0	0	0
Worth	<5	--	< 5	--
GEORGIA	**359**	**3.6**	**339**	**3.4**

Note: In counties where one to four TB cases were reported, "< 5" is used to represent the number of reported cases, and the TB case rate is not calculated.

Table 2. Number of TB Cases and TB Case Rates* per 100,000 population by Health District, Georgia, 2012-2013

Health District	2012		2013	
	Number of TB Cases	TB Case Rate	Number of TB Cases	TB Case Rate
1.1 Rome	10	1.6	13	2.0
1.2 Dalton	6	1.3	4	0.9
2.0 Gainesville	9	1.4	17	2.6
3.1 Cobb	17	2.0	19	2.2
3.2 Fulton	54	5.5	49	5.0
3.3 Clayton	13	4.9	9	3.4
3.4 Lawrenceville	31	3.0	48	4.6
3.5 DeKalb	81	11.5	79	11.1
4.0 LaGrange	13	1.6	6	0.7
5.1 Dublin	1	0.7	3	2.0
5.2 Macon	9	1.7	13	2.5
6.0 Augusta (excludes ASMP)	14	3.0	20	4.2
ASMP only	6	na	2	na
7.0 Columbus excludes SDC	20	5.3	6	1.6
SDC only	5	na	2	na
8.1 Valdosta	12	4.7	9	3.5
8.2 Albany	20	5.6	16	4.5
9.1 Coastal	18	3.1	9	1.5
9.2 Waycross	10	2.7	10	2.7
10 Athens	10	2.7	5	1.1
Total	**359**	**3.6**	**339**	**3.4**

Table 3. Percentage of TB Cases with Risk Factors for TB by Health District Georgia, 2013

HEALTH DISTRICT	Foreign-born %	HIV Infected %	Homeless %	Inmate %	Nursing Home %	Substance Abuse %
1.1 Rome	8	10	8	0	8	0
1.2 Dalton	75	0	0	0	0	25
2.0 Gainesville	59	0	0	0	6	6
3.1 Cobb	68	16	0	0	0	5
3.2 Fulton	29	16	27	4	0	20
3.3 Clayton	56	0	0	0	0	11
3.4 Lawrenceville	85	7	2	0	0	11
3.5 DeKalb	72	17	3	3	0	6
4.0 LaGrange	17	25	0	0	0	0
5.1 Dublin	33	0	0	0	0	0
5.2 Macon	46	10	15	0	0	8
6.0 Augusta	27	5	15	0	0	10
ASMP only	0	50	0	100	0	100
7.0 Columbus	33	25	0	0	0	33
SDC only	100	0	0	100	0	0
8.1 Valdosta	11	0	0	0	0	22
8.2 Albany	19	38	6	13	0	50
9.1 Coastal	33	0	11	0	0	20
9.2 Waycross	40	0	10	0	0	20
10 Athens	20	0	20	0	0	40
Georgia	**51**	**12**	**8**	**3**	**1**	**14**

Table 4. Primary Resistance to First-line Anti-TB Medications by Health District Georgia, 2013

TB Drug	Isoniazid		Rifampin		Ethambutol	
HEALTH DISTRICT	**No.**	**%**	**No.**	**%**	**No.**	**%**
1.1 Rome	0	0	0	0	0	0
1.2 Dalton	1	25	0	0	0	0
2.0 Gainesville	2	13	0	0	0	0
3.1 Cobb	3	18	0	0	0	0
3.2 Fulton	3	9	0	0	0	0
3.3 Clayton	0	0	0	0	0	0
3.4 Lawrenceville	4	13	1	3	0	0
3.5 DeKalb	4	9	0	0	0	0
4.0 LaGrange	0	0	0	0	0	0
5.1 Dublin	0	0	0	0	0	0
5.2 Macon	0	0	0	0	0	0
6.0 Augusta & ASMP	3	30	2	20	0	0
7.0 Columbus & SDC	0	0	0	0	0	0
8.1 Valdosta	0	0	0	0	0	0
8.2 Albany	0	0	0	0	0	0
9.1 Coastal	0	0	1	14	0	0
9.2 Waycross	0	0	1	14	0	0
10 Athens	0	0	0	0	0	0
Georgia Total	**19**	**8**	**5**	**2**	**0**	**0**

Table 5. Completion of TB Treatment (Tx) by Health District, Georgia, 2011-2012

HEALTH DISTRICT	2011		2012	
	No. Cases that Completed Tx/No. Cases Started Tx*	%	No. Cases that Completed Tx/No. Cases Started Tx*	%
1.1 Rome	3/3	100	10/10	100
1.2 Dalton	5/6	83	3/3	100
2.0 Gainesville	10/10	100	8/8	100
3.1 Cobb	17/17	100	13/14	93
3.2 Fulton	39/39	100	48/49	98
3.3 Clayton	5/6	83	10/12	83
3.4 Lawrenceville	44/45	98	24/25	96
3.5 DeKalb	66/68	97	72/72	100
4.0 LaGrange	7/7	100	11/11	100
5.1 Dublin	3/3	100	1/1	100
5.2 Macon	11/12	92	7/8	88
6.0 Augusta	7/7	100	13/13	100
ASMP only	16/16	100	6/6	100
7.0 Columbus	6/6	100	13/14	93
SDC only*	na	na	na	na
8.1 Valdosta	9/9	100	10/11	91
8.2 Albany	12/12	100	18/18	100
9.1 Coastal	10/11	91	15/15	100
9.2 Waycross	9/11	82	9/10	90
10 Athens	6/6	100	9/9	100
Georgia Total	**285/293**	**97**	**300/309**	**97**

***Cases who died or who left the U.S. during TB treatment are excluded**

Table 6. Timely Completion of TB Treatment (Tx) among TB cases eligible for 12-month TB Tx by Health District, Georgia, 2011-2012

HEALTH DISTRICT	2011		2012	
	No. Cases Completed Tx in 12 months/ No. Started Tx	%	No. Cases Completed Tx in 12 months/ No. Started Tx	%
1.1 Rome	2/3	67	9/9	100
1.2 Dalton	5/6	83	3/3	100
2.0 Gainesville	9/10	90	7/7	100
3.1 Cobb	17/17	100	10/12	83
3.2 Fulton	37/38	97	44/46	96
3.3 Clayton	5/6	83	8/11	73
3.4 Lawrenceville	38/44	86	20/21	95
3.5 DeKalb	62/67	92	71/72	99
4.0 LaGrange	6/7	86	11/11	100
5.1 Dublin	1/3	33	1/1	100
5.2 Macon	11/11	100	4/6	67
6.0 Augusta	7/7	100	13/13	100
ASMP only	13/16	81	5/5	100
7.0 Columbus only	6/6	100	12/13	92
8.1 Valdosta	6/9	67	10/11	91
8.2 Albany	11/12	92	17/17	100
9.1 Coastal	10/12		13/13	100
9.2 Waycross	8/10	80	9/10	90
10 Athens	6/6	100	8/9	89
Georgia Total	**260/289**	**90**	**275/291**	**94**

***Cases who died or who left the U.S. during TB treatment, rifampin-resistant cases, meningeal TB, TB of the bone or central nervous system, and children < 15 with miliary TB are excluded**

Table 7. Completely Evaluated Contacts of Sputum Smear Positive Cases by Health District, Georgia, 2011-2012

HEALTH DISTRICT	2011		2012	
	No. Contacts Evaluated/ No. Contacts Identified	%	No. Contacts Evaluated/ No. Contacts Identified	%
1.1 Rome	32/34	94	70/95	74
1.2 Dalton	35/46	76	42/51	82
2.0 Gainesville	36/48	75	48/97	50
3.1 Cobb	24/30	80	22/27	85
3.2 Fulton	324/348	93	217/257	84
3.3 Clayton	27/29	93	50/68	73
3.4 Lawrenceville	640/959	67	154/191	81
3.5 DeKalb	559/641	87	650/776	84
4.0 LaGrange	55/64	86	106/171	62
5.1 Dublin	236/329	72	15/17	88
5.2 Macon	75/88	85	172/224	77
6.0 Augusta	263/287	92	563/1002	56
7.0 Columbus	54/55	98	71/89	80
8.1 Valdosta	15/15	100	39/67	58
8.2 Albany	154/170	91	106/167	64
9.1 Coastal	45/51	88	65/95	68
9.2 Waycross	166/177	94	26/37	70
10 Athens	75/148	51	74/92	80
Georgia Total	**2815/3519**	**80**	**2490/3523**	**71**

Table 8. Infected Contacts exposed to Sputum Smear Positive Cases started on LTBI Treatment by Health District, Georgia, 2011-2012

HEALTH DISTRICT	2011		2012	
	No. Infected Contacts on LTBI Treatment / No. Infected Contacts	%	No. Infected Contacts on LTBI Treatment / No. Infected Contacts	%
1.1 Rome	9/13	69	9/10	90
1.2 Dalton	6/8	75	11/13	85
2.0 Gainesville	14/17	82	13/13	100
3.1 Cobb	1/5	20	1/ 2	50
3.2 Fulton	45/65	69	43/55	78
3.3 Clayton	4/10	40	3/17	18
3.4 Lawrenceville	59/144	41	22/45	49
3.5 DeKalb	117/153	77	79/143	55
4.0 LaGrange	20/22	91	26/39	67
5.1 Dublin	13/21	62	5/8	62
5.2 Macon	17/26	65	1/14	7
6.0 Augusta	4/14	29	135/197	68
7.0 Columbus	23/32	72	15/19	79
8.1 Valdosta	1/1	100	18/23	78
8.2 Albany	37/57	65	16/25	64
9.1 Coastal	9/12	75	21/30	70
9.2 Waycross	34/42	81	4/4	100
10 Athens	12/16	75	23/26	88
Georgia Total	**425/658**	**66**	**445/683**	**65**

Table 9. LTBI Treatment Completion of Infected Contacts exposed to Sputum Smear Positive Cases by Health District, Georgia, 2011-2012

HEALTH DISTRICT	2011		2012	
	No. Contacts that Completed LTBI Treatment / Contacts Treated	%	No. Contacts that Completed LTBI Treatment / Contacts Treated	%
1.1 Rome	3/9	33	3/9	33
1.2 Dalton	5/6	83	6/11	55
2.0 Gainesville	10/14	71	6/13	46
3.1 Cobb	1/1	100	1/1	100
3.2 Fulton	29/45	64	35/43	93
3.3 Clayton	4/4	100	2/3	67
3.4 Lawrenceville	38/59	64	19/22	86
3.5 DeKalb	100/117	86	56/79	71
4.0 LaGrange	10/20	50	18/26	69
5.1 Dublin	9/13	69	2/5	40
5.2 Macon	13/17	76	1/2	50
6.0 Augusta	1 / 4	25	66/135	49
7.0 Columbus	18/23	78	10/15	67
8.1 Valdosta	1/1	100	15/18	83
8.2 Albany	25/37	68	14/16	88
9.1 Coastal	7/9	78	19/21	91
9.2 Waycross	18/34	53	4/4	100
10 Athens	9/12	75	10/23	44
Georgia Total	**301/425**	**71**	**287/445**	**64**

Figure 1. TB Cases and Case Rates
Georgia,1983-2013

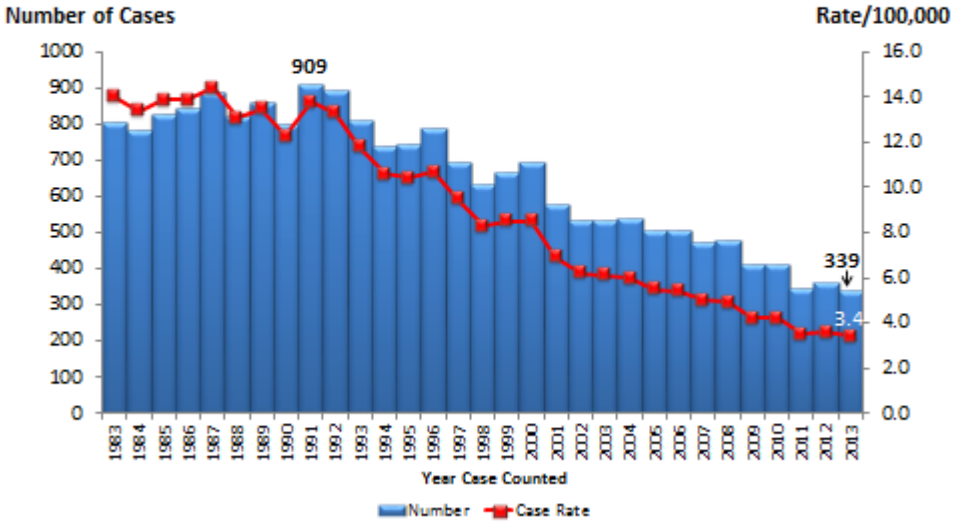


Figure 2. TB Case Rates
Georgia and U.S., 1983-2013

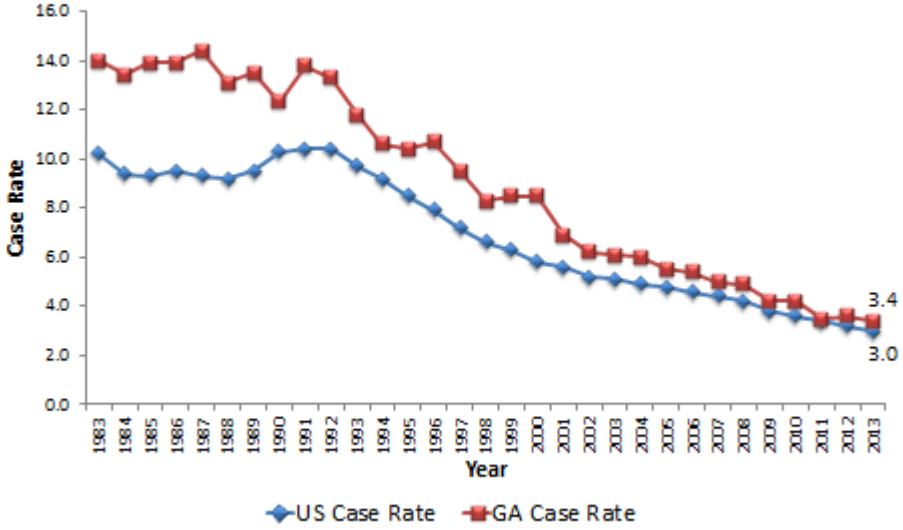


Figure 3. Number of TB Cases by Health Districts
Georgia, 2013

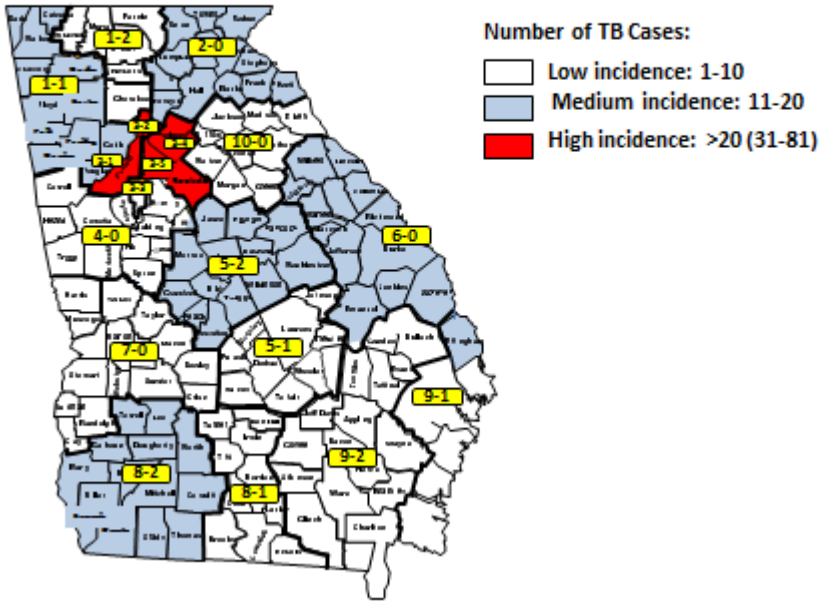


Figure 4. TB Case Rates by Health Districts
Georgia, 2013

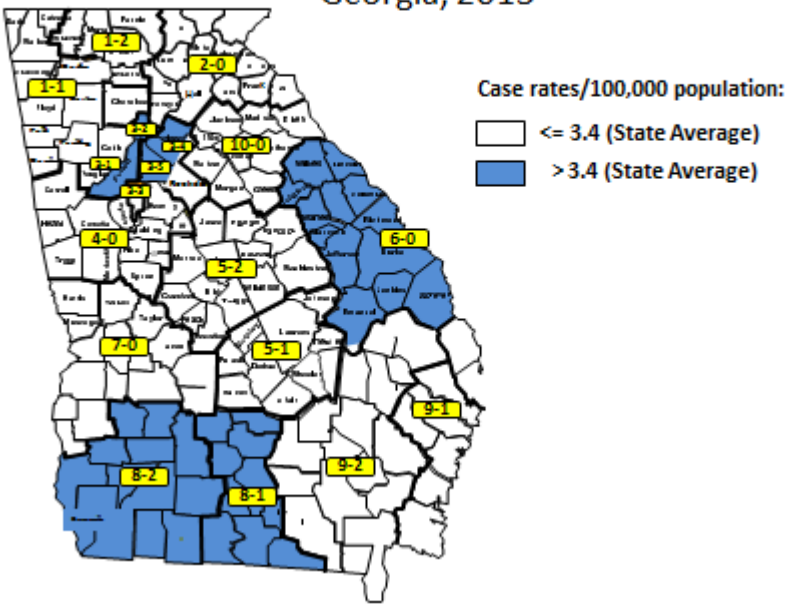


Figure 5. TB Cases by Age Group and Sex
Georgia, 2013

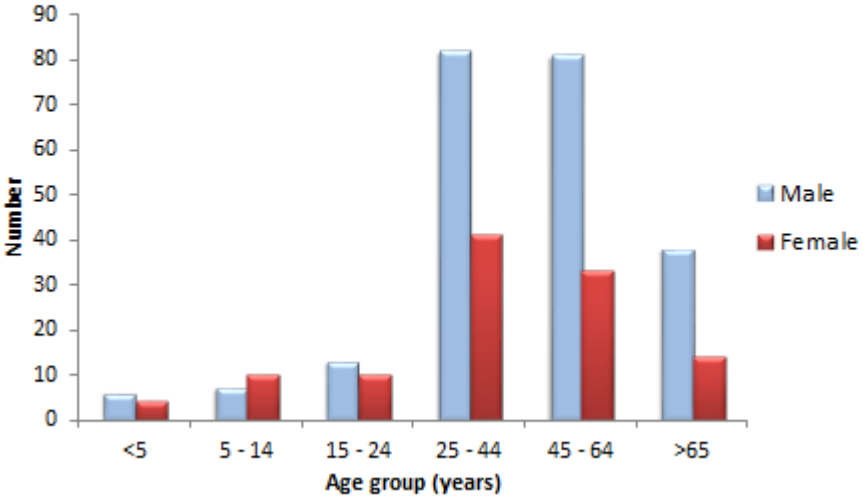
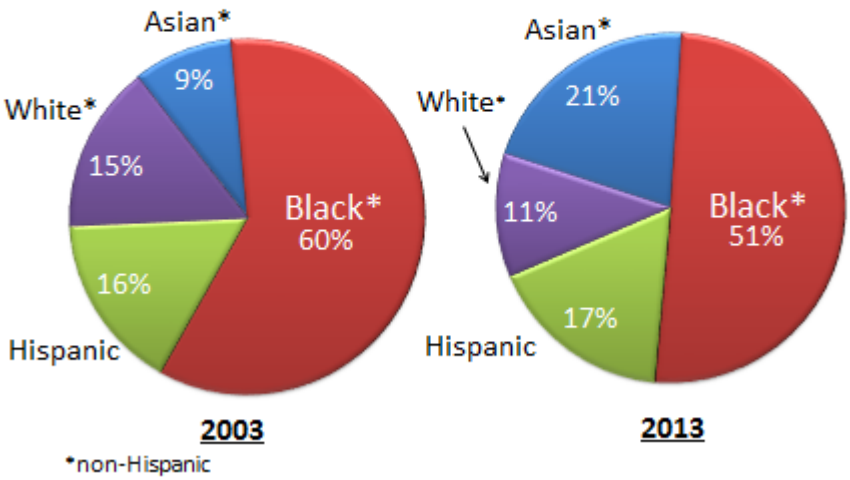


Figure 6. TB Case Rates* by Age Group
2009-2013, Georgia

Age Group	2009	2010	2011	2012	2013
< 5 yrs.	2.3	2	2.3	1.6	1.5
5-14 yrs.	0.5	0.9	0.7	0.9	1.2
15-24 yrs.	4.1	3.3	2.8	2.8	1.6
25-44 yrs.	5.1	5	4.4	4.3	4.5
45-64 yrs.	5.4	5.8	4.6	5.1	4.5
65+ yrs.	5.7	5.5	4.3	4.4	4.3

*Rates are per 100,000 population

Figure 7. TB Cases by Race/Ethnicity Georgia, 2003 and 2013



*non-Hispanic

Figure 8. TB Case Rates* by Race/Ethnicity Georgia, 2009-2013

Race/ Ethnicity	2009	2010	2011	2012	2013
Asian, non-Hispanic	29.7	24.1	16.8	19.8	19.5
Hispanic, All races	11.2	8.2	7.6	6.0	6.2
Black, non-Hispanic	6.2	7.1	5.3	6.1	5.5
White, non-Hispanic	1.2	1	0.9	0.9	0.7

*Rates are per 100,000 population

Figure 9. TB Case Rates in non-Hispanic Blacks and Whites, Georgia, 1993-2013

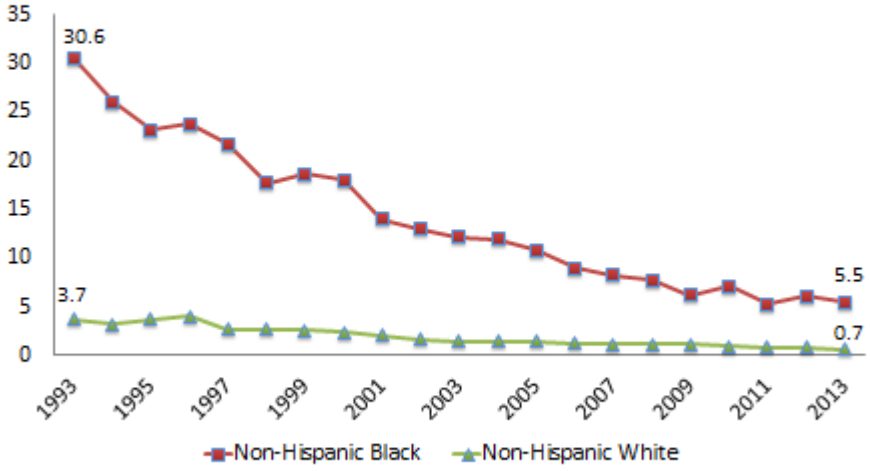


Figure 10. US-born and Foreign-born TB Cases Georgia,1993-2013

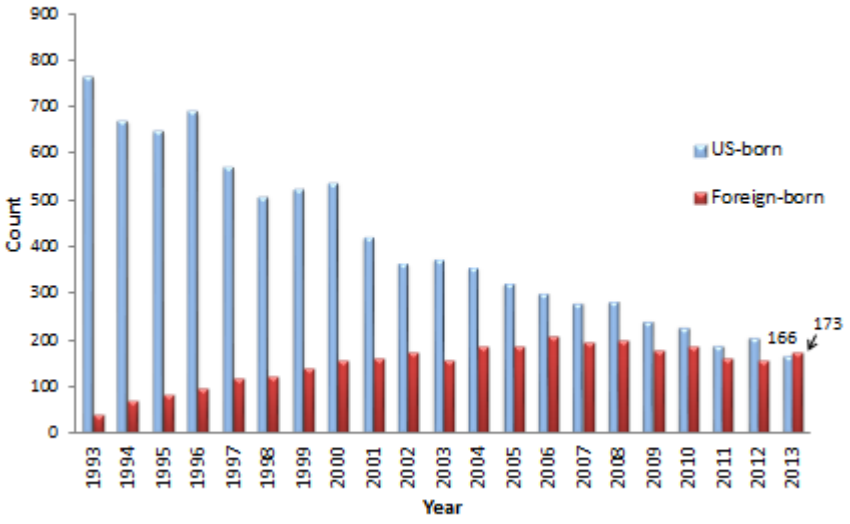


Figure 11. Percent of Foreign-born TB Cases (n=173) by Country of Origin, Georgia, 2013

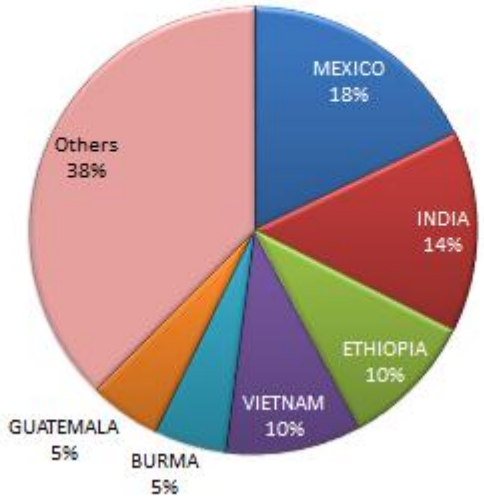


Figure 12. HIV Status of TB Cases Georgia,1993-2013

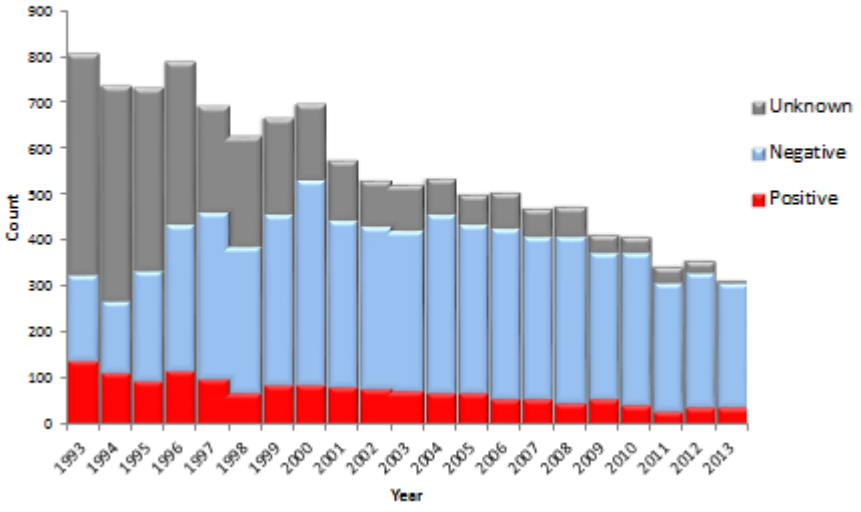


Figure 13. TB in Other High-Risk Populations
Georgia, 2009-2013

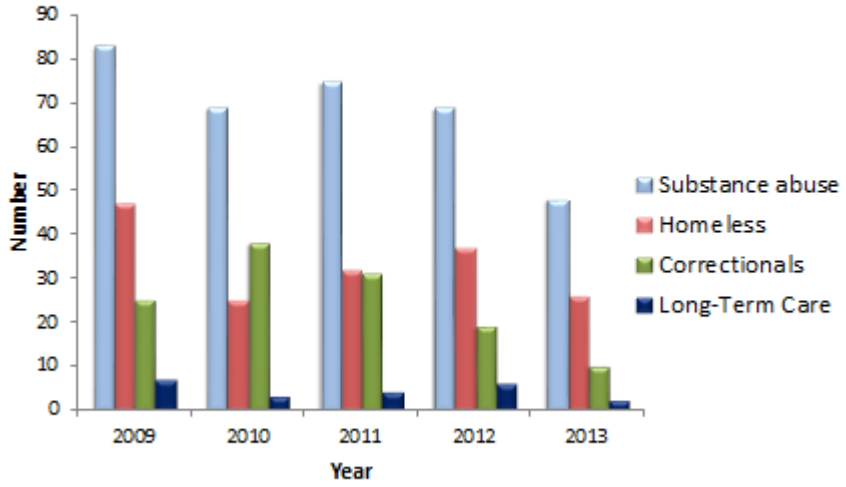


Figure 14. Primary Drug Resistance and MDR-TB
Georgia, 2009-2013

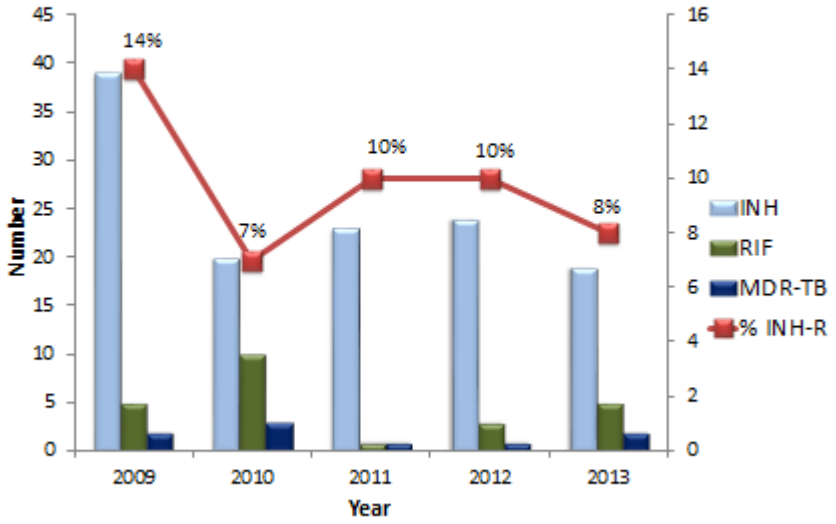
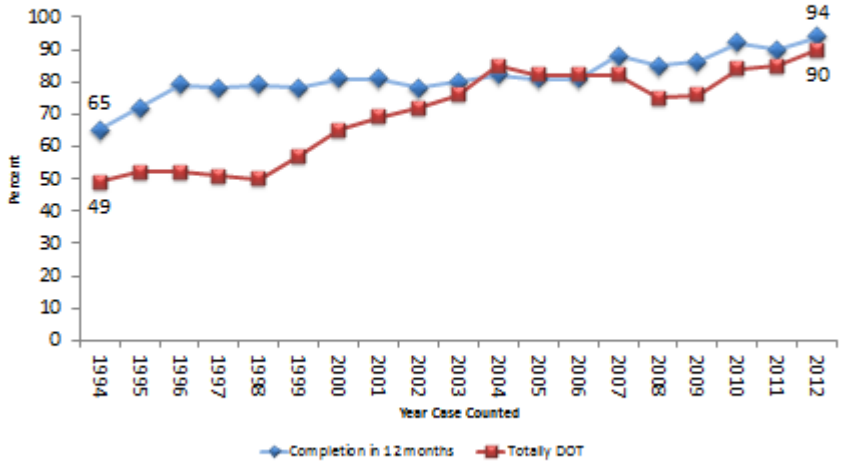
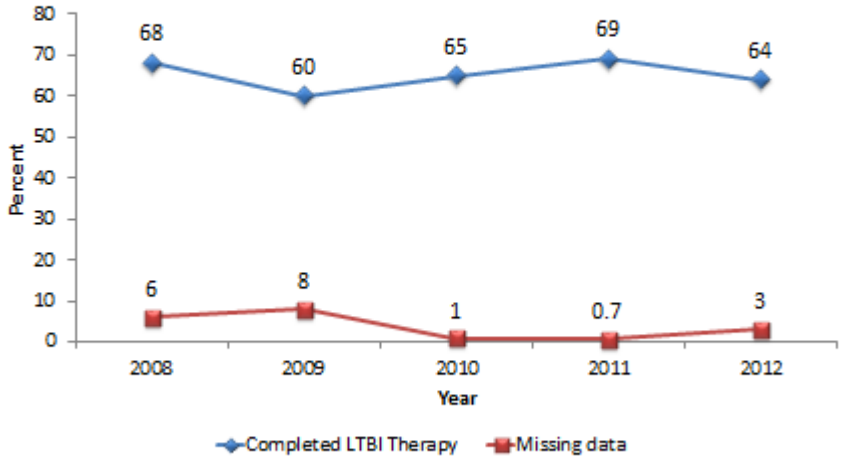


Figure 15. TB Treatment Completion within 12 months and Directly Observed Therapy (DOT) Georgia, 1994-2012*



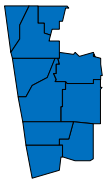
*DOT became the standard of TB care in Georgia in 1994. In 2009, CDC changed the calculation for TB treatment completion within 12 months to exclude TB cases who moved out of the U.S. while on TB treatment.

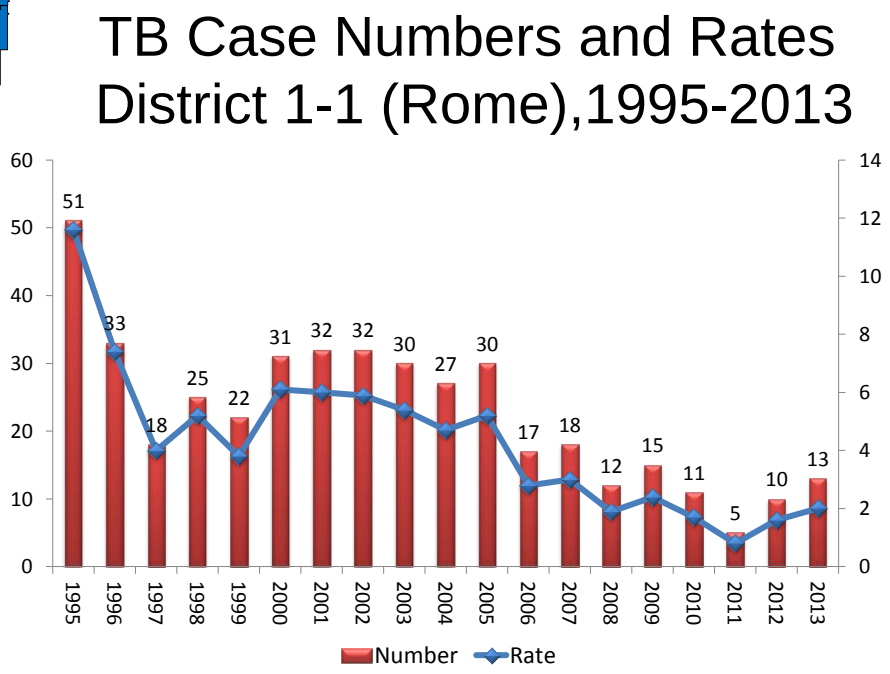
Figure 16. Completion of Latent TB Infection (LTBI) Therapy among all contacts of TB cases, Georgia, 2008-2012



Tuberculosis Morbidity Trends by Health District

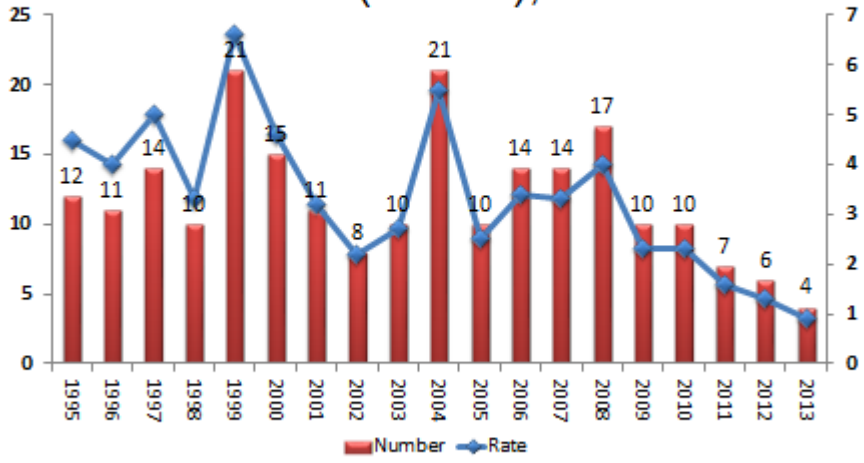
Georgia, 1995-2013





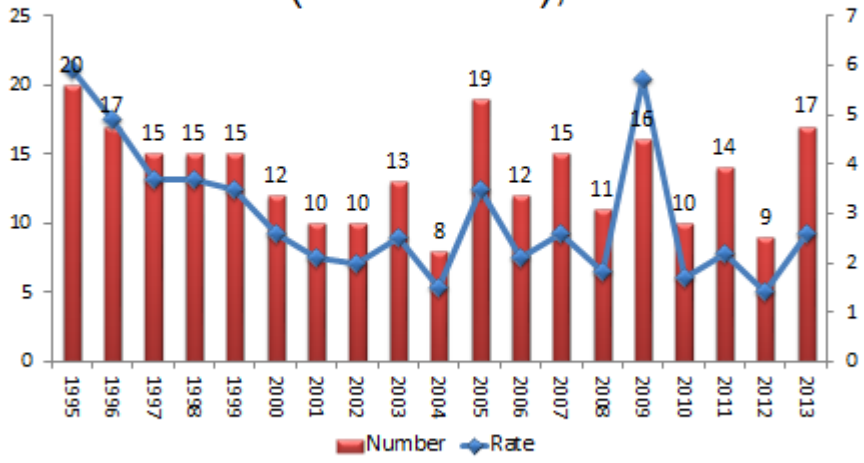
Rates are per 100,000 population
Source: GA TB surveillance database

TB Case Numbers and Rates District 1-2 (Dalton),1995-2013



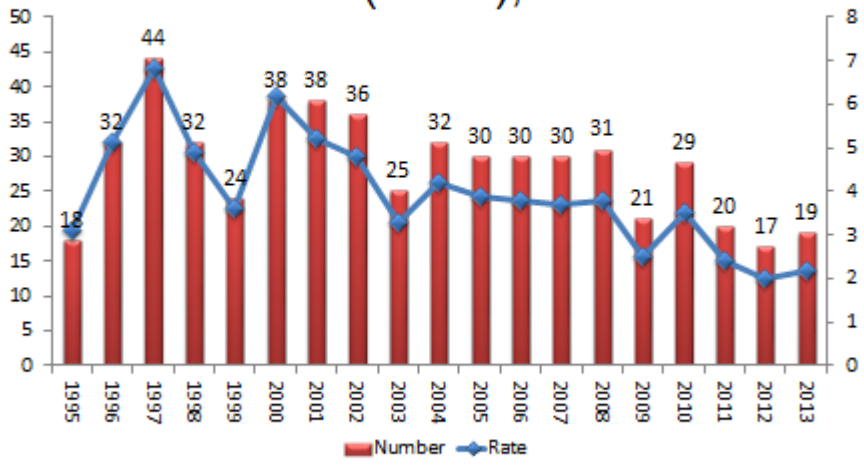
Rates are per 100,000 population
Source: GATB surveillance database

TB Case Numbers and Rates District 2 (Gainesville),1995-2013



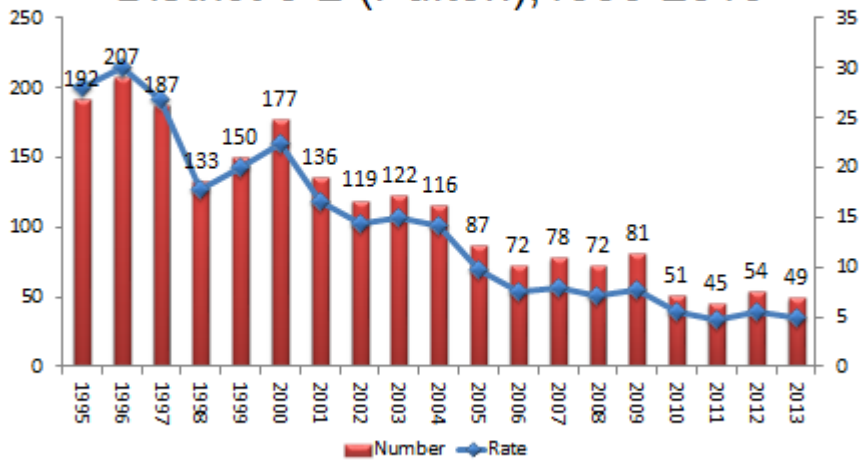
Rates are per 100,000 population
Source: GATB surveillance database

TB Case Numbers and Rates
District 3-1 (Cobb),1995-2013



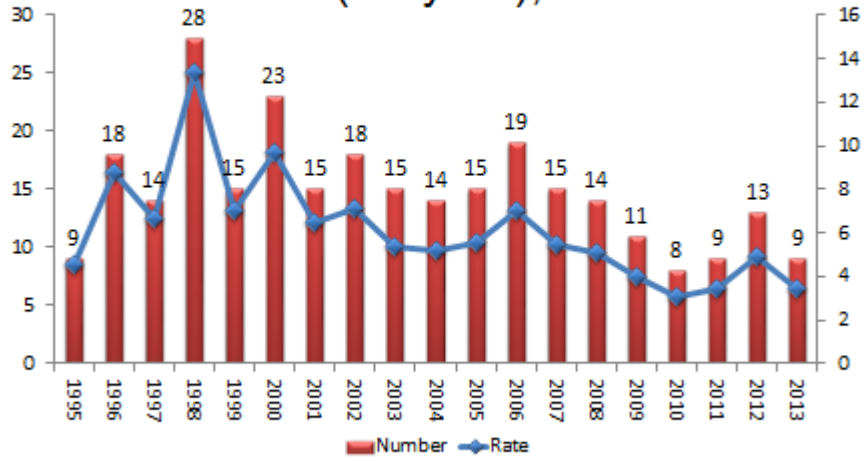
Rates are per 100,000 population
Source: GATB surveillance database

TB Case Numbers and Rates
District 3-2 (Fulton),1995-2013



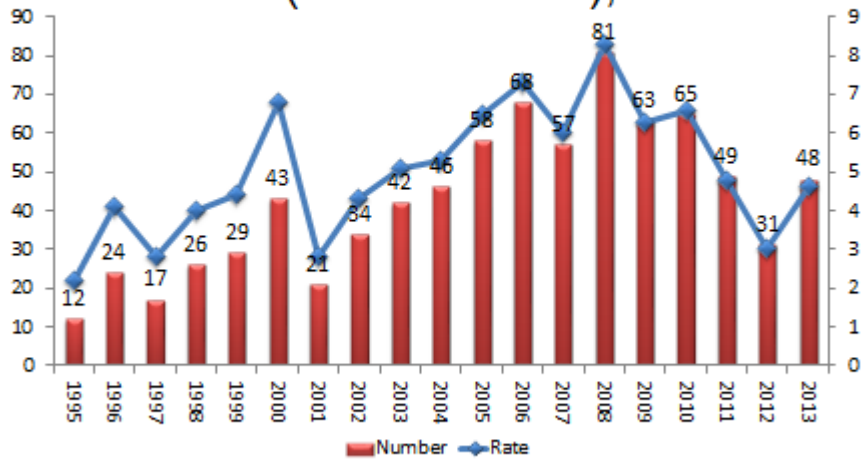
Rates are per 100,000 population
Source: GATB surveillance database

TB Case Numbers and Rates
District 3-3 (Clayton), 1995-2013



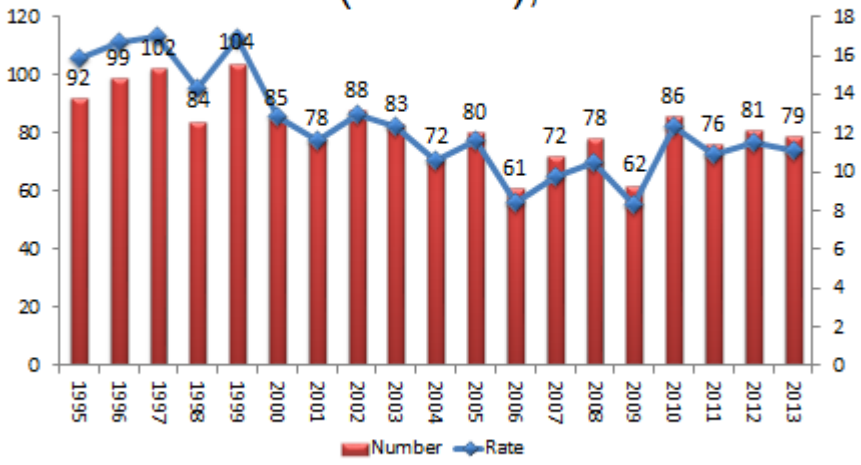
Rates are per 100,000 population
Source: GATB surveillance database

TB Case Numbers and Rates
District 3-4 (Lawrenceville), 1995-2013



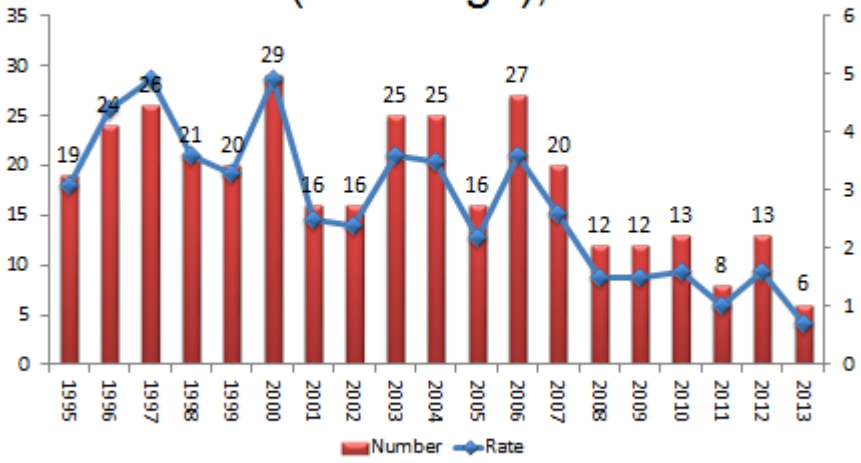
Rates are per 100,000 population
Source: GATB surveillance database

TB Case Numbers and Rates District 3-5 (DeKalb),1995-2013



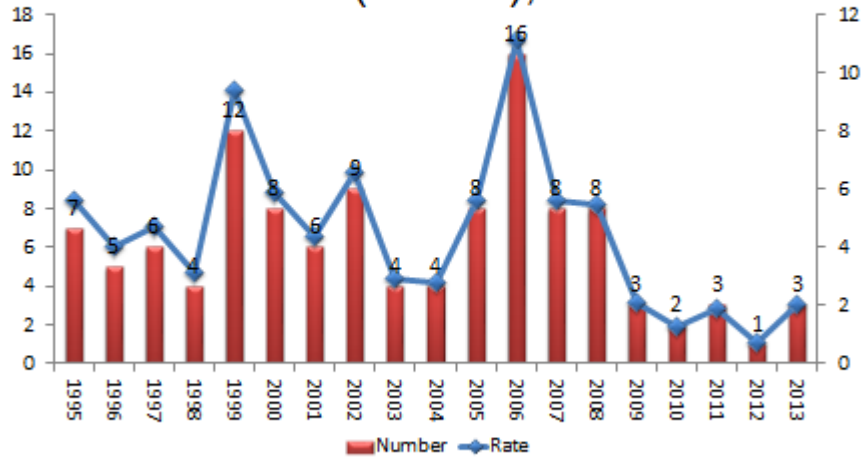
Rates are per 100,000 population
Source: GATB surveillance database

TB Case Numbers and Rates District 4 (LaGrange),1995-2013



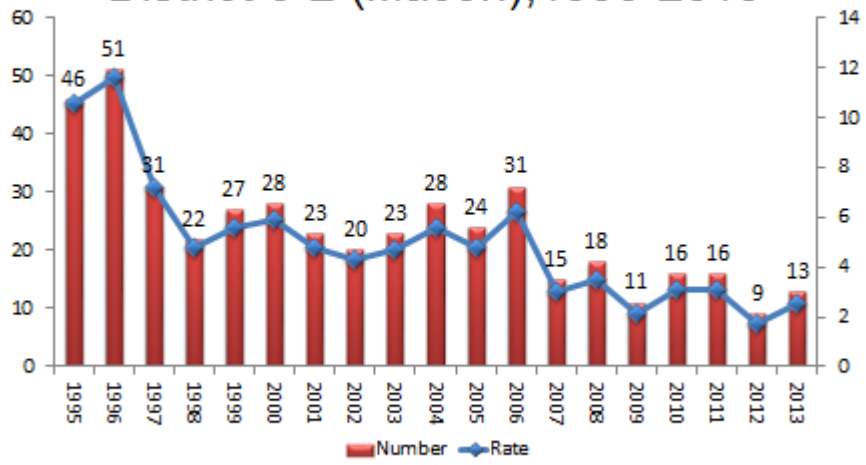
Rates are per 100,000 population
Source: GATB surveillance database

TB Case Numbers and Rates District 5-1 (Dublin),1995-2013



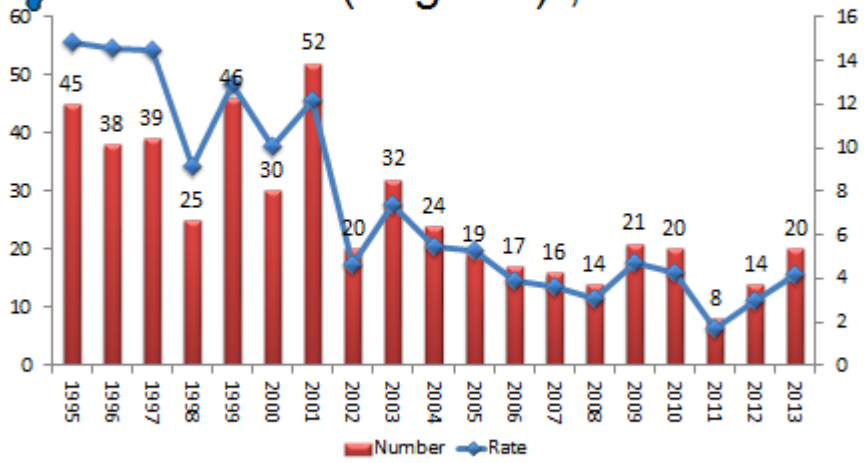
Rates are per 100,000 population
Source: GATB surveillance database

TB Case Numbers and Rates District 5-2 (Macon),1995-2013



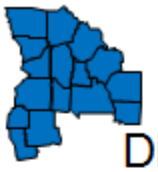
Rates are per 100,000 population
Source: GATB surveillance database

TB Case Numbers and Rates District 6 (Augusta)*,1995-2013

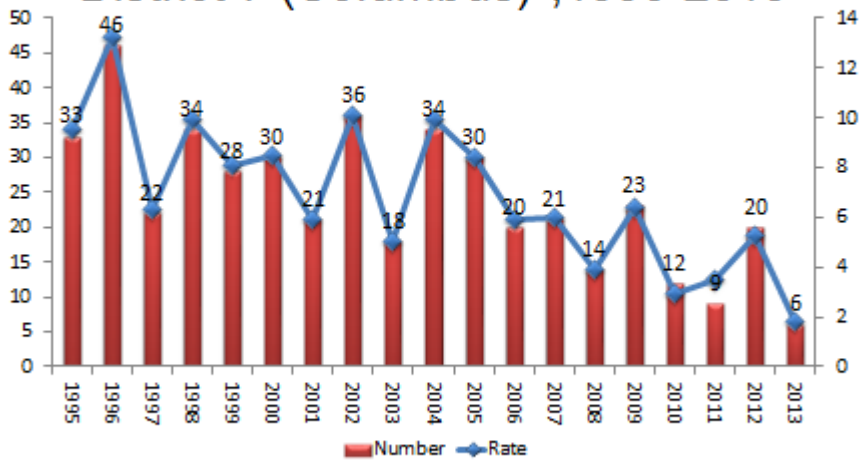


Rates are per 100,000 population
Source: GATB surveillance database

*Augusta State Medical Prison cases not included

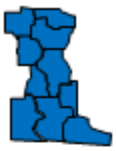


TB Case Numbers and Rates District 7 (Columbus)*,1995-2013

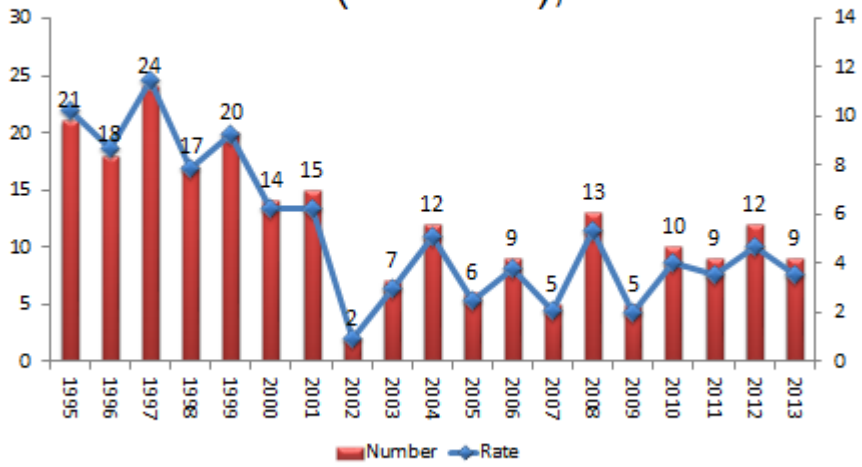


Rates are per 100,000 population
Source: GATB surveillance database

*ICE Detention Center cases not included

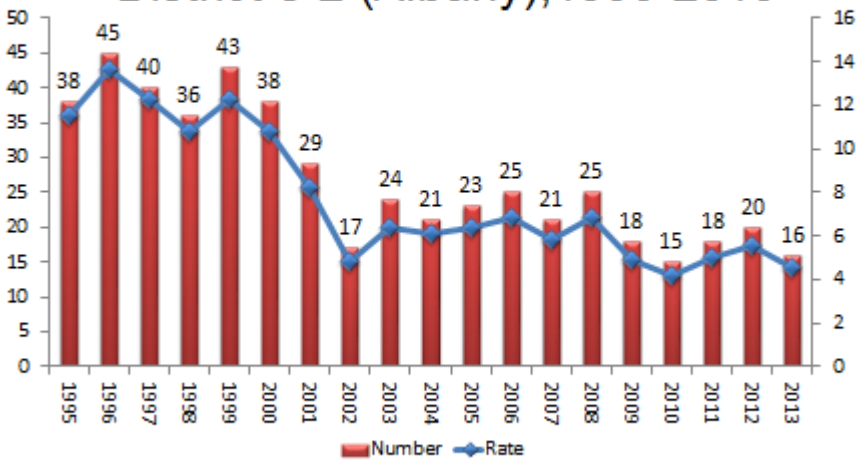


TB Case Numbers and Rates
District 8-1 (Valdosta),1995-2013



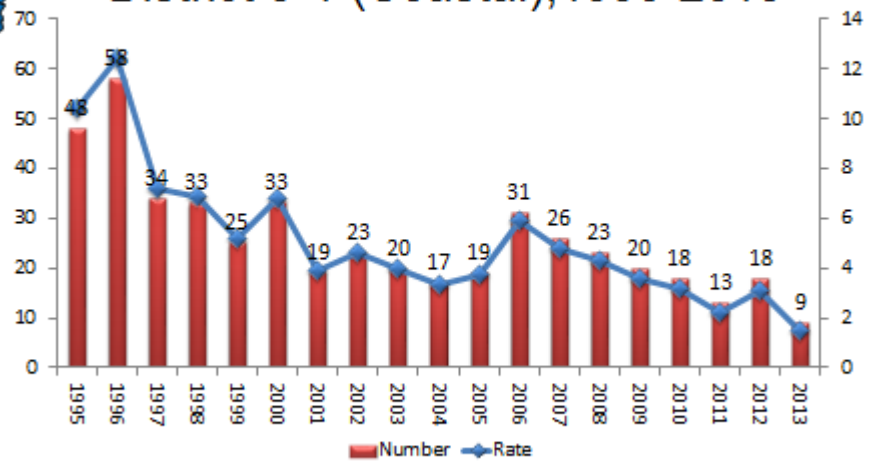
Rates are per 100,000 population
Source: GATB surveillance database

TB Case Numbers and Rates
District 8-2 (Albany),1995-2013

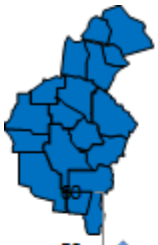


Rates are per 100,000 population
Source: GATB surveillance database

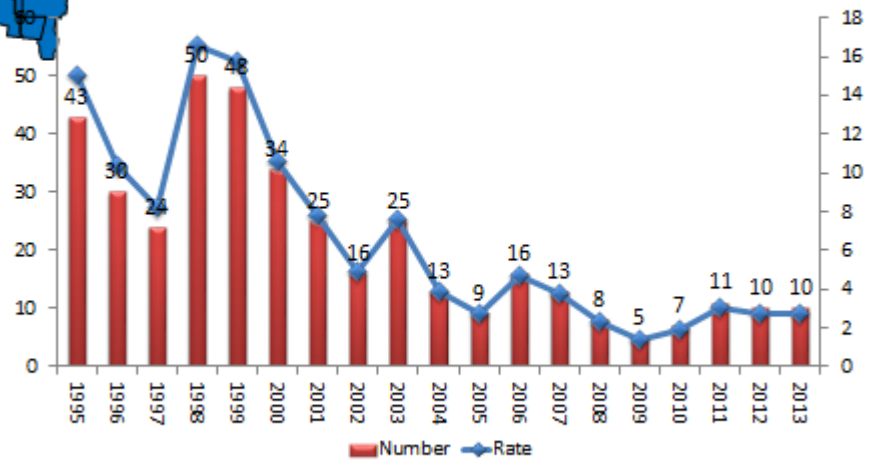
TB Case Numbers and Rates
District 9-1 (Coastal),1995-2013



Rates are per 100,000 population
Source: GATB surveillance database

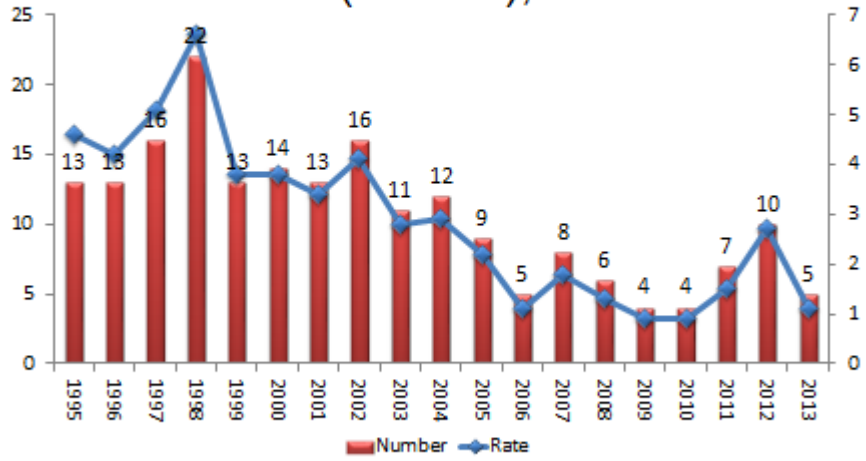


TB Case Numbers and Rates
District 9-2 (Waycross),1995-2013



Rates are per 100,000 population
Source: GATB surveillance database

TB Case Numbers and Rates
District 10 (Athens), 1995-2013



Rates are per 100,000 population
Source: GATB surveillance database